DOCUMENT RESUME

ED 092 182 JC 740 174

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TITLE Self-Pace Mastery Learning as Applied to Introductory Sociology.
INSTITUTION Lambton Coll. of Applied Arts and Technology, Sarnia (Ontario). Dept. of Social Science.
PUB DATE 14 Mar 74
NOTE 24p.; Paper presented at the Spring Meeting of the Community College Social Science Association (San Diego, California, March 1974)

EDRS PRICE MF-$0.75 HC-$1.50 PLUS POSTAGE
DESCRIPTORS *Autoinstructional Aids; *Junior Colleges; Self Actualization; *Self Help Programs; *Sociology

ABSTRACT

The objectives of this paper are threefold: (1) to present the structure and functioning of a system of "self-paced mastery learning" as evolved by the department over the period May 1972 to March 1974; (2) to discuss perceived "flaws" in traditional college level "learning systems" and receive input from readers regarding the educational relevance of the approach; and (3) to receive specific suggestions regarding further modifications of the system. (Author)

U S DEPARTMENT OF HEALTH
EDUCATION & WELFARE
NATIONAL INSTITUTE OF
EDUCATION

ED 092182

Self-Paced Mastery Learning As Applied To Introductory Sociology

Presented To The Spring Meeting

Of The

Community College Social Science Association

March 14, 1974

San Diego, California

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JC 740 174

OBJECTIVES

Objectives of the presentation/paper are threefold:

1. To present the structure and functioning of a system of "self-paced mastery learning" as evolved by our department over the period May 1972 to March 1974.

2. To discuss perceived "flaws" in traditional college level "learning systems" and receive input from listeners/readers regarding the educational relevance of our approach.

3. To receive specific suggestions regarding further modifications of our system.

INSTITUTIONAL SETTING

Lambton College is a small, comprehensive community college operated through funding of the Province of Ontario. It has about 800 students, most of whom are graduates of Grade 12 (the Ontario Secondary School System extends itself to Grade 13). The majority of students are of working class background, ethnically English, with a full range of motivational levels. About two-thirds come from the city and suburbs of Sarnia which has a population of approximately 70,000. The remainder are from the surrounding rural district. Many students suffer from lack of success in their high school background.

Lambton College is similar to comparable institutions in the U.S. with respect to its "open-door" policy. However, it differs from many equivalent American colleges in that, consistent with the other 19 Ontario colleges, it is looked upon as a genuine post-secondary alternative to university education. Consequently most programs within the institution are specifically employment-oriented, with little transfer to 4-year institutions. The usual range of programs are included, e.g. nursing, nursery school teaching, business and technology specialties, etc. The latter is especially active in Chemical Technology since one of the largest concentrations of petro-chemical industries in Canada is in the Sarnia area.

Lambton College was established in 1966 and has gained a reputation as a leader in instructional innovation in the region. It is perhaps most widely known for its annual "International Institute On The Community College" held in June.

Institutional goals have encouraged well-planned experimentation in instructional innovation. If a project appears to have merit it is supported with such "extras" as paid planning time, paraprofessionals, computer back-up, hardware, and printing.

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INFORMATION

"EDUCATIONAL MALPRACTICES"

Our experience has led us to support Don Stewart's use of the phrase "Educational Malpractices" (Educational Malpractices, Slate Services, 1971) to describe many characteristics of the post-secondary educational scene. Those "malpractices" to which we have tried to respond are as follows:

1. Standard Learning Pace
   The constraints of plant and personnel have been used as the rationale for forcing all students to digest a specific quantity of knowledge in a set period of time. Psychologists, on the other hand, have been claiming that all individuals do not "learn" at the same rate.

2. Content Mastery Defined by "Bell Curve"
   This refers to the concept of learning being measured by a student's relative standing in a class. Sometimes an individual rated as "A" (excellent?) has "learned" 60% of the content in order to achieve this exalted standing. His achievement is measured relative to others who have had the ill luck to learn even less!

3. One-Chance Learning
   The assumption that learning which is not completed on the "first try" is "non-learning" is basic to traditional education. We allow criminals a second and third chance to "learn" but tend to deny this to our own students!

4. Learning By Same Technique
   Teachers have traditionally chosen passive listening (lecture method) as the means of transmitting knowledge. Consequently they are missing too many students who tend to absorb knowledge better by reading, or by discussing, or by working on an individual project.

5. "Teacher-Centered" Learning System
   Education has become a highly institutionalized process wherein most activities revolve around the permanent members of the organization (faculty, staff, administration). Redesigning the environment to put the learner at the "Centre" is a necessary change toward efficient and well-motivated learning.

6. Subjective Grading
   The evaluation of what has been learned by an individual in "Academic Courses" has long been subject to the whims of the individual instructor. The criteria are often lacking. A student is left to guess what letter or numerical result will be assigned to his work.

7. Grading As A Guessing Game
In conjunction with the last point, students must play the game of "guess what parts (questions) of the course I am going to test you on." If the student is successful in doing just this he may pass, if he is not successful he may fail.

8. Teacher As Opponent
Often the result of the above structural problems is the separation of instructors and students into opposing camps. Teachers then become persons to overcome rather than to seek help from!

PRIMARY SYSTEM CHARACTERISTICS

Self-paced mastery learning as applied to our Introductory Sociology course is an attempt to attack the "malpractices" above. The chief characteristics of the approach are:

1. Self-Paced Learning
This means that the student can proceed at the speed which he finds most convenient and which fits his "learning style." A student can complete a "semester" course in four weeks or two years without prejudice to his academic success.

2. Mastery Learning
We feel that the "Bell Curve" is not an acceptable means by which to evaluate learning. The standards are absolute in this course! A student cannot complete the course without achieving demonstrated understanding of concepts, facts, or data which are central to the discipline. We, as professionals, must be able to specify these prior to the learning experience and determine when the specific learning has taken place.

IMPLEMENTATION OF SYSTEM

1. Course Outline and Student Initiation
Students are initiated into the course by means of a comprehensive (95 pages!) course outline and week-long series of seminars. It is important to spend this time at the beginning since students are unfamiliar with most elements of the system.

The course outline includes the following:

COURSE DESCRIPTION
PRINT MATERIALS NECESSARY
REFERENCES
GENERAL GOALS
COURSE ORGANIZATION

BEHAVIOURAL OBJECTIVES

EVALUATION OF BEHAVIOURAL OBJECTIVES

SEMESTER EVALUATION

GRADE CONTRACTING

TUTORIALS

ATTITUDINAL SURVEY (A "Project")

ALTERNATE OBJECTIVES

TEACHING ASSISTANT

COMPUTER FEEDBACK SYSTEM

STUDENT SUMMARIES

SEMINARS (1-13 LISTED)

BEHAVIOURAL OBJECTIVES (UNITS 1-13)

ALTERNATE SEMINAR OBJECTIVES

ATTITUDINAL SURVEY MATERIALS

At this point it is extremely important that students thoroughly understand all the components of their new learning system. To ensure this, we suggest that students be tested on their knowledge of the system. A student should not be allowed to proceed further until he demonstrates that he understands the system.

2. General Goals

We specify the following general goals to our students:

1) Provide the student with a framework with which he will be able to view his society more objectively.

2) Provide a basic familiarity with the discipline of sociology.

3) Acquaint the student with the basic vocabulary of sociology so that he may be able to understand the reasoning of sociologists.

4) Create a milieu in which the student can produce a consistent personal relationship to his social environment.

5) Teach the student to critically evaluate popular literature which purports to be social scientific in nature.

3. Course Organization

Introductory Sociology is comprised of two "one-semester" courses: Sociology 100 and Sociology 200. Each course consists of 13 learning units (see Appendix "A" for list of units). Each unit includes one seminar, one tutoral, and an evaluation session.

4. Behavioural Objectives

The course is designed in such a way as to take the guesswork out of learning. Students in other courses often complain that they don't know exactly what to study. This problem is overcome by providing the students with a list of behavioural objectives which spell out exactly what they must know in order to complete a unit.

There are 3 types of behavioural objectives.

1) C-Level Objectives

These require the student to demonstrate his understanding of basic sociological concepts either by describing them in his own words or by applying them to examples drawn from real life. These objectives must be achieved by students who wish to earn a C-grade in the course.

2) B-Level Objectives

These require the student to demonstrate his understanding of basic sociological concepts at a more sophisticated level. The student must formulate his own examples which illustrate various concepts. These objectives (along with C-level objectives) must be achieved by students who wish to earn a B-grade in the course.

3) A-Level Objectives

These require the student to formulate applications of basic sociological concepts to specific life situations. These objectives (along with C-level and B-level objectives) must be achieved by students who wish to earn an A-grade in the course. (See Appendix "B" for a full unit of objectives).

In addition to the above objectives, Seminar Objectives specify the participation requirements that must be met for each seminar.

Alternate Objectives exist for students who prefer another learning style and for those who do not achieve scheduled seminar objectives.

5. Grade Contracting

Students in this course select the grade which they wish to earn by completing a grade contract form. Students who do not complete all the requirements for the grade they have chosen will receive an "I" until they have completed the requirements they have set for themselves. Grade contracts can be changed at any time.

There are three semester grades that can be earned in this course: A, B, C. Below are work requirements for each.

"A" Grade:
1. Meet reading objectives (C-, B-, A- level)
2. Actively participate in 13 seminars (or equivalent alternate objectives for each seminar)
3. Perform and write up 1 attitudinal survey, or other project.

"B" Grade: 1. Meet reading objectives (C-, B- level)
2. Actively participate in 13 seminars (or equivalent alternate objectives for each seminar)

"C" Grade 1. Meet reading objectives (C-level)

(See Appendix "C" for Grade Contract Form)

6. Learning Techniques

The objectives of the course can be met by a mixture of the following learning techniques:

A. Use Of Print Materials. Behavioural Objectives and Alternate Objectives are keyed to specific text materials.

B. Individual Tutorials. Part of the Instructor's course load includes scheduled tutorials when students who experience difficulty with print materials can learn on a one-to-one basis.

C. Behavioural Objectives Workshop. In addition to the tutorials, an instructor conducts weekly objectives workshops in which he directs small group discussions regarding issues related to Behavioural Objectives.

D. Seminars. These provide an opportunity for students to discuss the applicability of basic sociological concepts to themselves and their society. Seminar activities include simulations, film discussions, values clarification, and video-taped interaction analyses.

(See Appendix "D" for list of seminar topics)

E. Involvement Project. Depending upon the grade contract, a student undertakes a research project which requires him to sample human behaviour patterns in his community. He analyzes and reports the results of his observations to the instructor or group.

7. Evaluation of Behavioural Objectives

The student is evaluated solely on the basis of the learning objectives for each unit. Evaluations are in the form of short-answer questions or matching questions which exactly reflect the learning objectives. Here is a simplified example.

Learning Objectives:

THE STUDENT MUST BE ABLE TO:
1. Define scientific truth, in his own words.
2. Given examples of culture traits, indicate whether each is associated with Canada, Britain, or the USA.

Evaluation:

1. Define scientific truth, in your own words _____

_____

2. Below are examples of culture traits. Indicate on the space provided whether each is associated with Canada (C), Britain (B), or the USA (U).

___ Buckingham Palace

___ The Maple Leaf

___ The Bald Eagle

___ The Beaver

All evaluations follow the same pattern as the examples.

The evaluation reflects the learning objectives directly. The student is evaluated on each behavioural objective listed for the unit. Therefore, the student knows exactly what is evaluated even before beginning the evaluation.

In order to receive credit for a particular unit:

1. C-level objectives must be completed with at least 80% proficiency.

2. B- and A- level objectives must be completed with 100% proficiency.

If a student fails to achieve this proficiency standard on the evaluation of a particular unit, he may rewrite the evaluation at a later date. The student is required to rewrite only those objectives in which he failed to demonstrate his proficiency. The student attempts each objective until he has achieved the proficiency level. The "Testing Centre" is available twelve hours a week.

If a student fails to achieve the proficiency standard on the second writing of a unit evaluation, he will be evaluated orally by the instructor on the third try. All subsequent evaluations are in oral form.

(See Appendix "E" for the unit evaluation keyed to the objectives specified in Appendix "B"

8. Teaching Assistant

A teaching assistant is assigned the task of invigilating the evaluation sessions and of grading the evaluations. These two functions represent her sole duties. All questions pertaining to the course content are directed to the instructors, and not to the teaching assistant.

All responses to evaluations are provided by the instructors to the assistant.

9. Feedback To Students

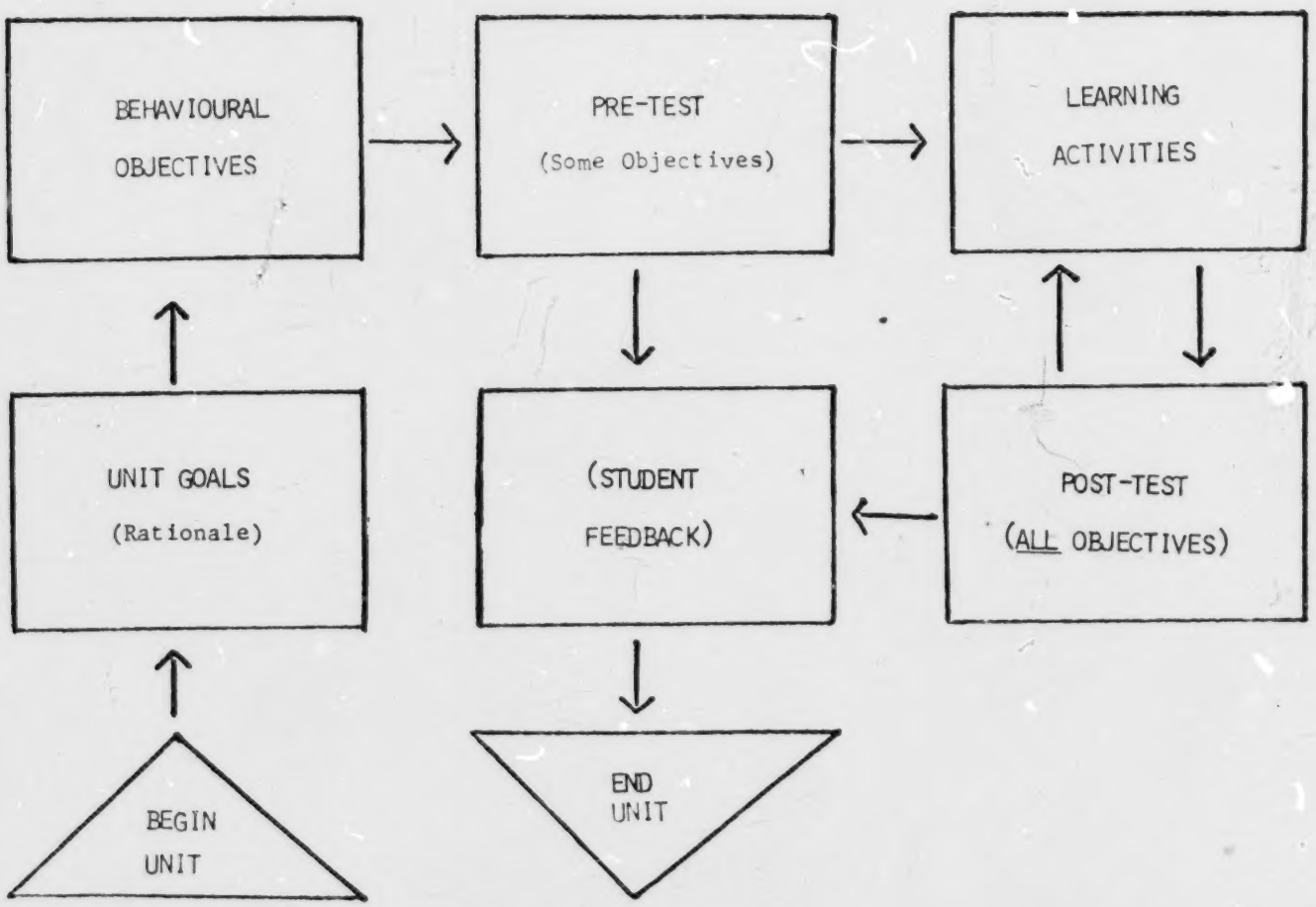
A weekly computer printout informs the student of his progress to date. This summarizes achievement of objectives in all learning units, seminars, and involvement activities.

(See Appendix "F" for a sample computer printout) deleted, marginal reproducibility

10. Model of System

The following flow chart represents a model of the learning process of a typical unit:

LEARNING UNIT FLOW CHART



PRINCIPLE BENEFITS

1. To Students:

   A. Free to work at their own pace.
   B. Success achieved by means of content mastery.
   C. Multiple-opportunity learning.
   D. Alternate learning techniques adaptable to individual learning styles.
   E. Focus of learning returned to student.
   F. Objective grading.
   G. Specific concepts or facts to be mastered known before beginning learning process.
   H. Relationship to teacher non-threatening.
   I. Success is self-motivating.

2. To Instructors:

   A. More time flexibility to assist students most needing help.
   B. Increased ability to shape the learning environment.
   C. Increased morale due to perceived role changes - as "helper" rather than opponent.
   D. Feeling of greater commitment to the learning process.
   E. Student success motivates instructor.

3. To Administration:

   A. Decreased necessity to deal with student-faculty misunderstandings.
   B. Greater cost efficiency.
   C. Documentation of institutional achievement (in terms of student learning) is easier to demonstrate to "Sponsors."
   D. A specific knowledge of course content.

4. To Institution:

   A. Generally higher efficiency.
   B. Higher morale among all members.
   C. Flexibility in meeting community needs through modification of specific learning objectives.
   D. Greater community and governmental support.
   E. A specific knowledge of course content.

THE FUTURE

University education has not adequately prepared us for our new roles as "systems managers" and educational innovators. We are painfully aware of the necessity to acquire new skills in order to modify the educational scene. We are sure the approach outlined in this paper will continue to evolve (or be replaced) as we develop greater educational sophistication.

Some of the "Educational Malpractices" that we have attempted to confront, continue to wander through our professional lives like demons requiring almost continual minor exorcisms. On the whole, however, we would not "rather be in Philadelphia! "

APPENDICES

APPENDIX A

Sociology 100 Learning Units:

Unit 1 - Science and the Search for Truth
Unit 2 - Fields and Methods of Sociology
Unit 3 - Structure of Culture
Unit 4 - Evolution of Culture
Unit 5 - Personality and Socialization
Unit 6 - Role and Status
Unit 7 - Social Control
Unit 8 - Social Deviation
Unit 9 - The Penal System
Unit 10 - Social groups
Unit 11 - Social institutions
Unit 12 - The Family
Unit 13 - Communes

Sociology 200 Learning Units:

Unit 1 - Formal Organizations
Unit 2 - Social Class
Unit 3 - Workmen in Society
Unit 4 - Social Mobility
Unit 5 - Social Processes
Unit 6 - Social Power
Unit 7 - Race and Ethnic Relations
Unit 8 - Collective Behaviour
Unit 9 - Population
Unit 10 - The Community
Unit 11 - Social and Cultural Change
Unit 12 - Social Movements
Unit 13 - Social Change II

"APPENDIX B"

UNIT 1

Formal Organizations

Behavioural Objectives (C-level)

Horton & Hunt. Sociology. Chapter 11

THE STUDENT MUST BE ABLE TO ACCOMPLISH THE FOLLOWING:

1. Given examples of social organizations, indicate whether each refers to a formal organization, informal organization, or social institution.

2. Given examples of formal organizations, indicate whether each refers to economic production, political power, societal integration, pattern maintenance, or play.

3. Given examples of organizations, indicate whether each is a closely structured organization or a loosely structured organization.

4. Given examples of decision-making power, indicate whether each refers to authority or influence.

5. Given examples illustrating the characteristics of a bureaucracy, indicate whether each refers to specialization, job tenure, formalistic impersonality or chain of command.

6. Given examples illustrating criticisms of the civil service, indicate whether each refers to invidious status, rigidity of performance, division of responsibility or bifurcation of allegiance.

7. Given examples of workers, indicate whether each refers to a professional or a bureaucrat, and for each, justify his answer.

UNIT 1

Formal Organizations

Behavioural Objectives (B-level)

THE STUDENT MUST BE ABLE TO ACCOMPLISH THE FOLLOWING:

1. Note his own example of
    a) a closely structured organization
    b) a loosely structured organization
2. Note one time in his life when
    a) a person used authority on him
    b) a person used influence on him
3. Note his own example of
    a) a professional
    b) a bureaucrat

UNIT 1

Formal Organization

Behavioural Objectives (A-level)

THE STUDENT MUST BE ABLE TO ACCOMPLISH THE FOLLOWING:

1. Discuss each of the following characteristics of a bureaucracy as they apply to Lambton College.

   (a) specialization

   (b) job tenure

   (c) formalistic impersonality

   (d) chain of command

"APPENDIX C"

PERFORMANCE CONTRACT

SOCIAL SCIENCES

COURSE TITLE_____SECTION_____

NAME OF INSTRUCTOR_____

NAME OF STUDENT_____

STUDENT NUMBER_____

With full understanding of the requirements for the grade I've chosen, I hereby select the following grade toward which I shall work:

A B C

(circle one)

Signature of Student _____

Date of Signature _____

"APPENDIX D"

Sociology 100 Seminar Topics:

Unit	Topic
-	Orientation
1	"Who Am I" Exercise
2	Experience In Inquiry
3	Film: "Future Shock"
4	Value Survey
5	College Socialization Pressures
6	Occupation Ratings
7	Film: "Like it Is"
8	Legal Sanctions
9	Group Interaction Analysis
10	Group Interaction Analysis
11	Film: "Four Religions"
12	Film: "Four Families"
13	Assembly Line Exercise

Sociology 200 Seminar Topics:

-	Orientation
1	Space Ambassadors Exercise
2	Film: "Life Style"
3	Social Class Exercise
4	The Miracle Workers Exercise
5	Film: "Hutterites"
6	Propaganda Exercise
7	Mass Media Exercise
8	Film: "Death"
9	Attitudes, Values and TV
10	Film: "Where We Live"
11	Social Readjustment Rating Scale
12	Sociology of Ann Landers
13	The Pie of Life

U

2 STUDENT NUMBER 8

COURSE SECTION 9

GRADE CONTRACT 10

NAME

"APPENDIX E"

SOC200-3

UNIT 1-EVALUATION

FORMAL ORGANIZATIONS

(C-LEVEL)

C-LEVEL 21 2

B-LEVEL 30 33

A-LEVEL 34 37

OFFICE USE ONLY

1. Below are examples of social organizations. Indicate whether each refers to a formal organization (F), an informal organization (I) or a social institution (S).

____ a friendship clique

____ religion

____ General Motors

____ education

____ Teachers Federation

2. Below in the right-hand column are types of formal organizations. Match each of these items with its corresponding example in the left column by writing the appropriate letter on the space provided.

____ Junior Pregressive Conservatives	a) economic production
____ Antique Automobile Club of Canada	b) political power
____ Scouts	c) societal integration
____ Chrysler Corporation	d) pattern maintenance
____ Canadian Medical Association	e) play

3. Below are examples of organizations. Indicate whether each is a closely structured organization (C) or a loosely structured organization (L).

____ government

____ the Baptist Church

____ the military

____ the Catholic Church

____ Lambton College

4. Below are examples of decision-making power. Indicate on the space provided, whether each refers to authority (A) or influence (I).

____ because Joe is the most popular guy in school, all his friends do what he wants to do

____ the King issues an ordinance forcing all people to pay him taxes

____ the Prime Minister's wife persuades him to take a holiday in Switzerland

____ the policeman orders the bank robber to surrender

5. Below, in the right hand column, are characteristics of bureaucracy. Match each of these with its corresponding illustration in the left column by writing the appropriate letter on the space provided.

____ after Joe has been teaching for 2 years with the same school, the principal will not be able to fire him.	a) specialization
____ everyone in an office is an expert in <u>his own</u> field.	b) job tenure
____ at the college, the President has authority over the Dean, who has authority over the Chairman, who has authority over the Teachers	c) formalistic impersonality
____ a set of rules ensures that everyone at the office must remain at work until 5:00 o'clock	d) chain of command

1c2

6. Below, in the right-hand column, are criticisms of the civil service. Match each of these with its corresponding illustration by writing the appropriate letter on the space provided.

____	prisons were designed to rehabilitate inmates; but employees of the prison system do nothing but control inmates to keep them in line.	a) invidious status
____	a person who is having difficulty with his unemployment insurance benefits is constantly being shuffled from one person to another, until he finally finds someone whom he can pin down to a decision	b) rigidity of performance
____	a social worker tells an unwed mother that she is inelligible for mother's allowance	c) division of responsibility
____	a clerk blindly follows regulations even when he knows that they are in error	d) bifurcation of allegiance

7. Below are examples of workers. Indicate whether each refers to a professional (P) or to a bureaucrat (B). Justify each answer.

		Justification
____	business manager	_____
____	nurse	_____
____	college teacher	_____
____	typist	_____

1c3

SOCIOLOGY 200

UNIT I

EVALUATION (B-LEVEL)

Formal Organization

1. Note your own example of

   a) a closely structured organization

   _____

   b) a loosely structured organization

   _____

2. Note one time in your life when

   a) a person used authority on you _____

   _____

   _____

   b) a person used influence on you _____

   _____

   _____

3. Note your own example of

   a) a professional

   _____

   b) a bureaucrat

   _____

SOCIOLOGY 200

UNIT I

EVALUATION (A-LEVEL)

Formal Organization

1. Discuss each of the following characteristics of a bureaucracy as they apply to Lambton College.

a) specialization _____

_____

_____

b) job tenure _____

_____

_____

c) formalistic impersonality _____

_____

_____

d) chain of command _____

_____

_____

1A1